

Pedestrian Network ³

3.0 Overview

A new pedestrian network plan for the Town of Holly Springs has been developed based on an examination of the existing conditions (Chapter 2) and an understanding of the community's vision and goals for an improved pedestrian network (Chapter 1). A review of the methodology and prioritization process used to create the Pedestrian Network Plan is provided below, followed by descriptions of the individual pedestrian corridor components: sidewalk projects, intersection improvements, and greenways.

Achieving overall pedestrian connectivity is a major goal for this Plan. Currently, there is a lack of connectivity between pedestrian facilities and trip attractors. Some of the connections are minor and will be relatively easy to implement, such as filling minor gaps within the existing sidewalk system. Other pedestrian connections will be more difficult and expensive to implement, such as the provision of sidewalks and crosswalks around most schools and commercial areas. These latter improvements, however, are highly valuable to the community, particularly in the realm of child safety. Improvements to these areas could potentially save lives and they could provide children with a safer route to school.

3.1 Pedestrian Network Methodology

A variety of information sources were consulted during the development of the Pedestrian Network: previous plans and studies, the consultants' fieldwork, public input and noted pedestrian trip attractors. The following list of informational inputs was used in the development of the pedestrian network.

- Locations of existing facilities
- Observed gaps in existing facilities or deficiencies in facilities
- Locations of the existing arterial roads
- Locations of existing and future trip attractors, including schools, parks, shopping areas, downtown, etc.



*Figure 3(a):
Fieldwork, shown here at the Holly Springs Nature Trail, was a key component of developing the recommended pedestrian network.*



*Figure 3(b):
Connecting the pedestrian network to schools, like Holly Springs Elementary shown here, was an important goal when developing the pedestrian network.*

- Locations of major street intersections and crossings
- Locations of safety concern (high pedestrian and auto traffic and inadequate facilities)
- Connectivity of regional pedestrian and greenway networks
- Opportunities for greenway development including open space, available land, easements, new developments
- Public comments made during community workshops and surveys
- Recommendations from representatives of the Steering Committee
- Field observations made by the consultant
- Planned sidewalk and greenway improvements from Holly Springs Capital Improvement Plan
- Projects and recommendations from previous planning efforts, summarized in Chapter 2, including the Village District Area Plan, Northeast Gateway Area Plan, and Open Space Master Plan

Several concepts were developed as guides for the network development process. These concepts represented the interests expressed by the client, the steering committee, and the public. They also help achieve the goals articulated in other local planning documents. Some of the concepts that guided the development of the network included:

1. To provide adequate pedestrian access and connectivity to Downtown, schools, and shopping areas
2. To develop pedestrian facilities along arterial streets where no sidewalk or gaps in the existing sidewalk exist
3. To design or retrofit crossings to improve the safety of pedestrians
4. To take advantage of open space and hydrological resources to construct greenway trails to create a natural recreational experience for pedestrians

3.2 The Network

The Proposed Pedestrian Network for Holly Springs consists of sidewalk projects, intersection improvement projects and greenways corridor development. Together these proposed

facilities should be developed or improved to create a safe and connected pedestrian network throughout the Town. The network includes on-road pedestrian facilities (sidewalks, intersection, and crosswalk improvements) and off-road facilities (greenways). On-road and off-road components should be integrated together to provide a connected pedestrian transportation and recreation network.

The network will be completed in phases as prioritized in Chapter 5, Implementation. However, the network segments should be developed when there is opportunity, regardless of the order. Successful development of the Holly Springs Pedestrian Network will require a long-term, cooperative effort between the Town, the North Carolina Department of Transportation, and other local and state agencies. Regional connectivity should also be considered during future development of the sidewalk and greenway network.

All pedestrian corridor projects undertaken by the Town of Holly Springs should aim to meet the highest standards possible. At a minimum, each pedestrian corridor should possess curb cuts with ramps at all driveways and intersections. Within each identified corridor, roadway intersections should have marked crosswalks, and major intersections should have pedestrian crossing signals. Sidewalks should be constructed on both sides of the street along thoroughfares and residential collectors. Wider sidewalks, with curb cuts and improved surface conditions will correct sidewalks that currently do not satisfy the standards set forth by the American Disability Act of 1991. Traffic calming measures, such as curb extensions, traffic circles, medians, and pedestrian islands should be used to create a more hospitable environment for pedestrians in neighborhoods and in dense pedestrian districts. See Chapter 6, Design Guidelines for specific descriptions on recommended facilities. Finally, opportunities should be taken to incorporate pedestrian facilities into all municipal and state roadway improvement and widening projects, even if the route is not designated as a pedestrian corridor within this plan.

Three main types of pedestrian projects have been identified for the Town of Holly Springs and are outlined below. They include sidewalk projects, intersection improvement projects, and greenway corridors. Design guidelines in Chapter 6 provide



Figure 3(c): Gaps in sidewalk connectivity, like this one on Holly Springs Road, were identified and added to the recommended pedestrian network.

detailed information regarding proper placement and facility treatments.

Sidewalk Projects

Sidewalk projects are the major component of the proposed pedestrian corridors in Holly Springs. Sidewalk projects are located along road segments that require sidewalks on both sides of the roadway to provide adequate pedestrian connections throughout the Town of Holly Springs. The pedestrian corridor network is focused on significant roadways that provide service to major destinations within Holly Springs and link multiple land uses, such as residential, recreational, institutional, and commercial. The proposed pedestrian facilities along significant roadways craft the spine of the entire pedestrian network. Some sections along these significant roadways have existing sidewalk. However, the existing sidewalk is segmented, creating gaps in the connectivity or lacking sidewalk on one side of the street. Sidewalk projects are prioritized in Appendix B and high priority segments are illustrated on Map B.1. Recommended sidewalk projects include the placement of sidewalk on both sides of the street where needed.

Intersection Improvement Projects

Consultant fieldwork and public input identified numerous intersections in Holly Springs that are in need of minor to significant pedestrian facility improvements. Intersections present a situation where a pedestrian must traverse the motor vehicle environment and adequate facilities should be provided, specific to the intersection, to provide a safe crossing environment. Below is a list of intersections targeted for pedestrian facility improvement. Specific observations and recommendations are outlined in Table 3.1 and illustrated on Map 3.1.

- ~ Main Street and Oak Hall/Cayman
- ~ Main Street and Oak Hall/Springstone
- ~ Holly Springs Road and Main Street
- ~ Holly Springs Road and Cayman
- ~ Holly Springs Road and Cobblepoint Way
- ~ Holly Springs Road and Middlecrest Way
- ~ Holly Springs Road and Linksland Drive
- ~ Holly Springs Road and Sunset Lake Road
- ~ Holly Springs Road and Bass Lake Road

- ~ Sunset Lake Road and Wescott Ridge Road
- ~ Bass Lake Road (Bass Lake Park) and Salem Ridge Road
- ~ Bass Lake Road and Brook Manor
- ~ South Main Street and Highway 55 Bypass (end) and Ralph Stephens
- ~ South Main Street and Teal Lake/Ralph Stephens
- ~ Optimist Farm Road and Roseberry Road
- ~ Highway 55 Bypass and Ballentine Road
- ~ Avent Ferry Road and Highway 55 Bypass
- ~ Avent Ferry Road and Cass Holt Road

Greenway Corridors

Greenway corridors are off-road, multi-use facilities that provide an excellent source for alternative transportation and recreation. Greenway corridors can also serve an environmental purpose, to protect forests and enhance water quality.

Greenway corridors can be constructed of natural materials, gravel, crushed stone, asphalt, or concrete, depending upon the projected usage and surrounding landscape. These corridors typically take advantage of linear stream corridors, easements, and other tracts of open space. Greenway trails in Holly Springs should be integrated with and serve as an off-road extension of the on-road pedestrian network. Numerous greenway opportunities were identified throughout Holly Springs, via consultant fieldwork, public input, and previous local and regional planning efforts. Proposed greenway corridors are illustrated on Map 3.1.



Figure 3(d):

The existing greenway (east of Town), underpass at Utley Creek/NC 55 Bypass, and sewer easement (west of Town), provide an excellent opportunity to connect central Holly Springs westward to other developing areas of Town and provide access across a major roadway obstacle.

3.3 Regional Connections

Holly Springs' proximity to the greater Raleigh-Durham metropolitan area enables the Town to not only develop a local pedestrian network, but to link up with neighboring communities and become a component of a regional pedestrian network. Raleigh, Cary, Apex and Fuquay-Varina have regional pedestrian and greenway recommendations that this plan is in accordance with. Additionally, CAMPO has engaged in numerous efforts to establish a regional network of pedestrian and greenway recommendations throughout Wake County. As development continues in outlying portions of Holly Springs, the Town should work together with neighboring communities to fill in gaps and link their respective pedestrian networks.

Upon evaluation of existing planning efforts from surrounding communities, a network of regional pedestrian connection corridors has been identified for the Holly Springs area. These corridors are illustrated on Map 3.2 and discussed below.

A unique regional pedestrian connection exists with the near by American Tobacco Trail (ATT). The ATT is a regional multi-use trail constructed on an abandoned rail line and is also a segment of the East Coast Greenway. The ATT begins in Downtown Durham, extends south across northeast Chatham County and currently terminates in southwest Wake County in the Bonsal community. The current terminus of the ATT is located near the intersection of New Hill-Olive Chapel Road and Olive Dairy Road, just to the northwest of Holly Springs. A proposed extension of the ATT will link the current terminus of the trail to Harris Lake Park in southern Wake County. The proposed corridor for this extension is located just to the west of Holly Springs. It is recommended that Holly Springs work with local land owners to acquire property to establish spur trails from the Town to the proposed ATT extension corridor. Contact Triangle Rails-to-Trails for more information (www.triangletrails.org).

The proposed I-540 interstate corridor traverses the northern edge of Holly Springs and offers a potential to incorporate a long distance regional pedestrian element to the project. The Apex Bicycle Plan calls for the establishment of a multi-use greenway trail along this corridor and it is recommended that this facility

be extended to serve the Holly Springs area as well. This facility will offer a long distance corridor that will be utilized by a wide variety of users from across the area.

Northern and northeastern Holly Springs are in close proximity to existing greenway facilities in both Apex and Cary. Emphasis should be placed on linking existing and proposed greenway corridors in Holly Springs with Apex and Cary.

The Middle Creek corridor extends southeasterly from Holly Springs to Fuquay-Varina. Presently, this corridor terminates into a predominately rural area. Holly Springs should investigate establishing a regional spur trail along this corridor to the North Carolina Mountains-to-Sea Trail, which follows the Neuse River in Wake and Johnston Counties. Such a spur could provide a southern link between the East Coast Greenway and the North Carolina Mountains-to-Sea Trail, two major regional trail initiatives. Contact the North Carolina Department of Environment and Natural Resources, State Trails Coordinator for more information about the (www.enr.state.nc.us).

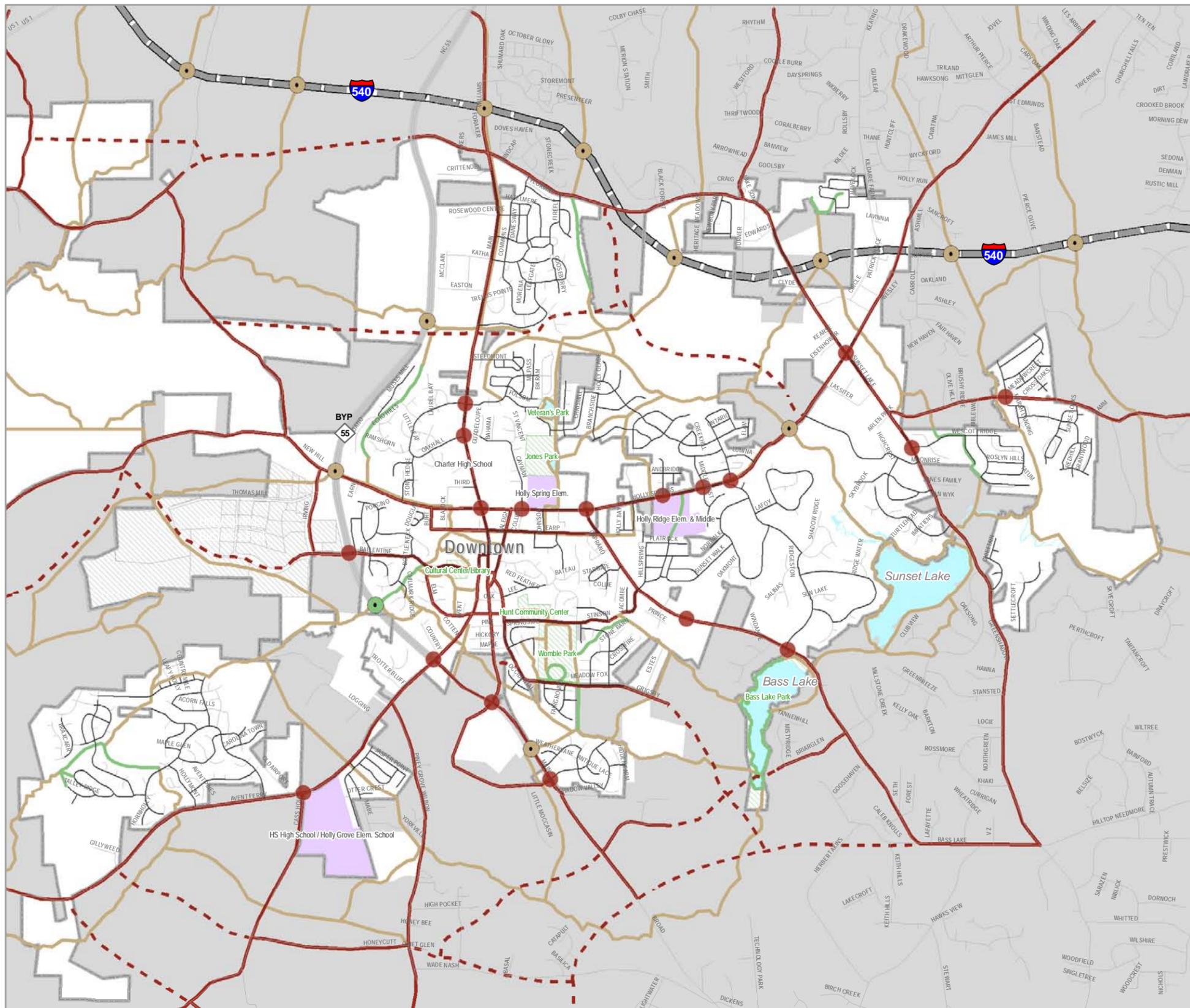
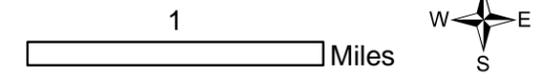
Regional pedestrian connections will benefit the citizens of Holly Springs by offering long distance alternative transportation and recreation benefits. Additionally, citizens from throughout the region will enjoy access to the Town of Holly Springs thus providing an economic benefit to the Town.

Pedestrian Network



Legend

- Intersection Improvement Site
- Proposed Grade Sep. Pedestrian Crossing
- Existing Grade Sep. Pedestrian Crossing
- Sidewalk Project - Existing Road
- - - Sidewalk Project - Future Road
- Existing Greenway
- Proposed Greenway
- Existing Sidewalk
- Road
- NC 55 Bypass
- I-540 - Future Corridor
- Town Boundary
- School
- Park/Recreation Facility
- Business Park
- Lake



Intersection Improvement Projects	Road 1	Road 2	Reason	Sight Distance	Signage (Y/N)	Controlled/Uncontrolled	Curb Ramp (Y/N)	Curb Radius	Marked Crosswalk (Y/N)	Crosswalk Condition	Pedestrian Xing Signal (Y/N)	Curb Extension (Y/N)	Sidewalk	Speed limit	Median island	Recommendations (curb extensions, marked crosswalks, countdown signals, signage, reduction of curb radius, median islands, high visibility, advance warning signal/signage, traffic calming)
1	Holly Springs Road	Main Street	Major Intersection	OK	N	Controlled Stop Light	Yes (all)	OK, could see some reduction	Y (2 solid lines)	OK	Y, Push-button signal, not countdown	N	Y (Sidewalk everywhere but doesn't continue on N-S on east side of Main St.)	35 (all ways)	Yes, but not a refuge	*Crosshatch crosswalks or texture *Extend median islands for refuge *Extend sidewalks all ways away from intersection *Add countdown to ped xing signal
2	Holly Springs Road	Cayman	School	Ridge towards town, not great	N	Controlled Stop Signs	Yes (at crosswalk over Cayman)	OK	Y (on north side of Holly Springs Rd. across Cayman)	Good	N	N	Y (On north side of Holly Springs Rd and east side of Cayman)	20 - Cayman 35 - Holly Springs Rd.	N	No recommendation because connection to south is lacking and there is another crosswalk closer to school but if there is one: *Marked crosswalk over Holly Springs Road *Sidewalk on south side of Holly Springs Road with crosswalk over Collins *Median island for refuge *Advance warning signs
3	Holly Springs Road	Cobblepoint	School	OK	Yes in school vicinity along Holly Springs Rd.	Controlled Stop Signs	Y	OK	Only on south side of Holly Springs Rd across Elementary school entrance	OK, some cracking	N	N	No sidewalk extending to school or on west side of Cobblepoint	20 - residential 35 - Holly Springs Rd.	N	*Restripe and create median island for refuge *Advanced warning signs and lights *Overhanging flashing speed reduction in school zone *Extend sidewalk into school grounds *Crossing guard during school hours
4	Holly Springs Road	Middlecrest	School	OK	Yes, pointing towards crosswalk	Controlled Stop Signs	Y	Average, could see some reduction	Y (on west side crossing of Holly Springs Rd.)	OK	N	N	Sidewalk both sides of Holly Springs Rd.; Sidewalk east side of Middlecrest (South) and west side of Middlecrest	25 - residential 35 - Holly Springs Rd.	N	*Restripe and create median island for refuge *Advanced warning signs and lights *Overhanging flashing speed reduction in school zone *Crossing guard during school hours *Marked crosswalks across Middlecrest both sides
5	Holly Springs Road	Linksland	Neighborhood Connection	Poor to east	N	Controlled Stop Signs	N	Average, could see some reduction	N	N/A	N	N	N	35 - Holly Springs 20 - Linksland	N	*Need sidewalk on both roads *Marked crosswalk across Holly Springs Rd. and across Linksland (north side) *Advanced warning signs and lights *Need curb cuts
6	Holly Springs Road	Sunset Lake	Major Intersection	OK	N	Controlled Stop Light	Y	Average, could see some reduction	Y (except for east side parallel to Sunset Lake Rd.)	OK	Y, Push-button signal, not countdown	N	Y (sidewalk everywhere)	35 - Holly Springs 35 - Sunset Lake	Yes, median islands everywhere but not a refuge	*Crosshatch crosswalks or texture *Extend median islands for refuge *Add crosswalk to Sunset Lake Rd. (N-S) on east side *Add countdown to ped xing signal Currently not connecting anything but Business Park so no connection yet but if there is one: *Add stoplight - ped countdown signals, marked crosswalks, sidewalks center highway refuge island
7	NC 55 Bypass	Ballentine	Bypass	OK	N	Controlled Stop Signs	N	N	N	N/A	N	N	No sidewalk	Hwy 55 - 55	N	*Big
8	NC 55 Bypass	Avent Ferry	Bypass	OK, but high speed makes it tough	N	Controlled Stop Light	N	Wide, could use reduction	N	N/A	N	N	No sidewalk	35 - Avent Ferry Hwy 55 - 45 or 55	Y	*Need sidewalk on both sides of Avent Ferry *Countdown pedestrian signals *Marked crosswalks across Hwy 55 - large hatch *Reduce speed of Hwy 55 *Pedestrian refuge island
9	NC 55 Bypass	South Main Street	Bypass	OK, but high speed makes it tough	N	Controlled Stop Light	N	Wide, could use reduction	N	N/A	N	N	No sidewalk	357 - Main St. Hwy 55 - 45 or 55	Y	*Need sidewalk on both sides of Main St./Ralph Stephens *Countdown pedestrian signals *Marked crosswalks across Hwy 55 - large hatch *Reduce speed of Hwy 55 *Pedestrian refuge island
10	NC 55 Bypass	Ralph Stephens/Teal Lake	Bypass	OK, but high speed makes it tough	N	Controlled Stop Signs	N	OK	N	N/A	N	N	Sidewalk only on south side of Teal Lake	25 - Teal Lake Hwy 55 - 45 or 55	Y	*Need sidewalk on both sides of Teal Lake & Ralph Stephens *Need stoplight *Countdown pedestrian signals *Marked crosswalks across Hwy 55 - large hatch *Reduce speed of Hwy 55 *Pedestrian refuge island
11	Sunset Lake Road	Wescott Ridge Road	Neighborhood Connection	Not good back towards Optimist Farm	N	Controlled Stop Signs	Y (on Sunset Fairway)	OK	N	N/A	N	N	Sidewalk on Wescott Ridge side of Sunset Lake Rd.; Sidewalk on Sunset	25 - Residential 45 - Sunset Lake	N	*Marked crosswalk *Advance warning signs and crossing lights *Reduce speed of Sunset Lake
12	Holly Springs Road	Bass Lake Road	Intersection	OK	N	Controlled Stop Light	Y	Average, could see some reduction	N	N/A	N	N	Sidewalk along south side of Holly Springs Rd.; sidewalk both sides	35 - Bass Lake 35 - Holly Springs	N	*Add pedestrian countdown
13	Optimist Farm	Thorndale/Rosemary	Neighborhood Connection	Not good back towards Town	N	Controlled Stop signs	Y	OK	N	N/A	N	N	Sidewalk one side of Roseberry	25 - residential 45 - Optimist Farm	N	*Need sidewalk coming into intersection *Marked crosswalk over Optimist Farm *Advance warning signs and crossing lights *Reduce speed of Optimist Farm *Reduce speed of Bass Lake first
14	Bass Lake Rd	Bass Lake Center	Neighborhood Connection to park	Not good, especially opposite the Town side	N	Uncontrolled	N	N	N	N/A	N	N	No sidewalk except some coming into park area	45 - Bass Lake	N	*Marked crosswalk on Town side of park entrance (better sight distance) *Advance warning signs and crossing lights *Adjustments of pedestrian entrance, drainage, and landscaping coming into park *Mid-block crossings
15	Avent Ferry	Cass Holt	Neighborhood Connection to schools	Not good with curve	N	Controlled Stop Signs	N	Ok	N	N/A	N	N	No sidewalk; construction though along Cass Holt (school side)	45 - Avent Ferry 45 - Cass Holt	N	*Reduce speed of both roads first *Add stoplight (probably will be added) *Marked crosswalk all sides with stop light *Overhanging flashing speed reduction in school zone *Pedestrian - school signage
16	Bass Lake Rd	New development at Brook Manor	Neighborhood Connection to pool across Bass Lake	OK	-	-	-	-	-	-	-	-	No sidewalk and development construction just beginning	45 - Bass Lake	N	No development yet, but when development occurs: *Marked crosswalk *Advance warning signs and crossing lights *Reduce speed of Bass Lake

Intersection Improvements

